UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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ART UNIT	PAPER NUMBER
2672	

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _20 January 2004_.

2a)☐ This action is **FINAL.** 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1,3,5,7-13,15-23,26 and 27_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1, 3, 5, 7-13, 15-23, and 26-27_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The amendments filed on 01/20/2004 have been entered. Claims 1, 3, 5, 7-8, 10-13, 15-17 and 19

have been amended. Claims 2, 4, 6, 14, and 24-25 have been canceled. Claims 1, 3, 5, 7-13, 15-

23, and 26-27 are pending in the application.

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 1, 3, 5, 7-13, 15-23, and 26-27 are rejected under 35 U.S.C. 102(e) as being

anticipated by Chilimbi et al. U.S. Pat. No. 6,330,556 (hereinafter Chilimbi).

3.   Claim 1:

The Chilimbi reference teaches a method of information structuring in a data set

containing a plurality of items (see the abstract), comprising:

            Ranking related objects based upon relationship strength (reordering takes

place wherein edges between data elements in different data structures are not

even put in the model for building the affinity graph-column 7 and field layout is

optimized for inherent locality by placing fields that show strong affinity close to each other using a greedy algorithm to produce structure field order recommendations from a structure field affinity graph-column 8 in the sense that re-ordering takes place for the layout configuration affinity-Note that affinity graph encompasses a wide range of graphs as taught by the cited reference including the layout configuration affinity graph), the ranking including for each related object to a selected object, calculating an affinity value between each of the related objects and the selected object based upon one or more criteria (affinity value between each of the related objects and the selected object is the weight assigned to the edge in the affinity graph to represent the field affinity which is a function of temporal information and execution frequency with each data structure access point as derived from the trace file. Moreover, metrics have been used to evaluate structure field orders. See Figures 2-3, 5 and 7; column 6-10); and

Ordering each of the related objects in the data set according to the affinity value between the related object and the selected object (reordering takes place wherein edges between data elements in different data structures are not even put in the model for building the affinity graph-column 7 and field layout is optimized for inherent locality by placing fields that show strong affinity close to each other using a greedy algorithm to produce structure field order recommendations from a structure field affinity graph-column 8 in the sense that re-ordering takes place for the layout configuration affinity);

Clustering related objects (clustering related database objects in the same cache block; column 12-13); and

Computing the number of affinity charts per object (affinity graphs can be drawn based on the database objects in the cache block for each object), wherein the one or more criteria includes a subjective measurement (Metrics have been used to evaluate structure field orders wherein the re-ordering takes place by the greedy algorithm taking into consideration of the subjective measurement such as the metadata created by the programmer wherein the re-ordering accounts for the field constraints defined by the metadata. See Figures 2-3, 5 and 7; column 6-10).

Claim 3:

The claim 3 encompasses the same scope of invention as that of claim 2 except additional claimed limitation of objective measurement. However, the Chilimbin reference further discloses the claimed limitation of the objective measurement (Metrics have been used to evaluate structure field orders wherein the re-ordering takes place by the greedy algorithm taking into consideration of the subjective measurement such as the metadata created by the programmer wherein the re-ordering accounts for the field constraints defined by the metadata. See column 6-10).

4.   Claim 5:

The Chilimbin reference teaches a method of generating a graphic layout, comprising:

Selecting a principal node for the graphical layout (such as the node a; see figures 2-3, 5

and 7);

Generating at least one affinity chart in connection with the principal node (figures 2-3

and 7; column 6-10), the at least one affinity chart comprising an affinity curve (figures

2-3, 5 and 7); and

Sequentially establishing related items along the at least one affinity chart by rank

(Metrics have been used to evaluate structure field orders wherein the re-ordering takes

place by the greedy algorithm taking into consideration of the subjective measurement

such as the metadata created by the programmer wherein the re-ordering accounts for the

field constraints defined by the metadata. See column 6-10).

Claim 7:

The claim 7 encompasses the same scope of invention as that of claim 5 except additional

claimed limitation of a list of related items. However, the Chilimbin reference further

discloses the claimed limitation of a list of related items (such as the neighboring fields in

the affinity graph; see column 9 and Figures 2-3, 5 and 7).

Claim 8:

The claim 8 encompasses the same scope of invention as that of claim 5 except additional

claimed limitation of positioning the selected principal node at a prominent location in

said graphical layout. However, the Chilimbin reference further discloses the claimed

limitation of positioning the selected principal node at a prominent location in said

graphical layout (the nodes a, b, c have been placed in the prominent locations in the

graphical layout as shown in figure 2-3, 5 and 7).

Claim 9:

The claim 9 encompasses the same scope of invention as that of claim 5 except additional

claimed limitation of computing the size of the item. However, the Chilimbin reference

further discloses the claimed limitation of computing the size of the item (using the field

sizes; column 9).

Claim 10:

The claim 10 encompasses the same scope of invention as that of claim 5 except

additional claimed limitation of the gradients to suggest item affinity level. However, the

Chilimbin reference further discloses the claimed limitation of the gradients to suggest

item affinity level (hot object(class) or cold object(class) and clustering or coloring, and

attributes and/or levels of objects in the affinity graph to indicate the affinity level; see

Figure 5 and column 12-13).

Claim 11:

The claim 11 encompasses the same scope of invention as that of claim 10 except

additional claimed limitation of the color gradient. However, the Chilimbin reference

further discloses the claimed limitation of the color gradient (hot object(class) or cold

object(class) and clustering or coloring, and attributes and/or levels of objects in the

affinity graph to indicate the affinity level; see Figure 5 and column 12-13).

Claim 12:

The claim 12 encompasses the same scope of invention as that of claim 10 except

additional claimed limitation of the size gradient. However, the Chilimbin reference

further discloses the claimed limitation of the size gradient (e.g., Figure 5).

Claim 13:

The claim 13 encompasses the same scope of invention as that of claim 5 except

additional claimed limitation of preventing overlap of related items. However, the

Chilimbin reference further discloses the claimed limitation of preventing overlap of

related items (e.g., field constraints preventing information overlap of related items;

column 9-10).

5.   Claim 15:

The claim 15 encompasses the same scope of invention as that of claims 1, 8 and 13. The

claim 15 is subject to the same reasons given in claims 1, 8 and 13.

Claim 16:

The claim 16 encompasses the same scope of invention as that of claim 15 except

additional claimed limitation of expressing closeness along shaped segments, emanating

from j's position. However, the Chilimbin reference further discloses the claimed

limitation of expressing closeness along shaped segments, emanating from j's position

(figures 2, 3, 5 and 7; column 12-13).

Claim 17:

The claim 17 encompasses the same scope of invention as that of claim 16 except

additional claimed limitation of curved segments. However, the Chilimbin reference

further discloses the claimed limitation of curved segments (figures 2, 3, 5 and 7; column

12-13).

6.   Claim 18:

The claim 18 encompasses the same scope of invention as that of claims 1, 5, 7-8, 11, 13

and 15. The claim 18 is subject to the same reasons given in claims 1, 5, 7-8, 11, 13 and

15.

7.   Claim 19:

The claim 19 encompasses the same scope of invention as that of claims 1, 5, 7-8, 11, 13

and 15. The claim 19 is subject to the same reasons given in claims 1, 5, 7-8, 11, 13 and

15.

8.   Claim 20:

The claim 20 encompasses the same scope of invention as that of claims 15 and 18. The

claim 19 is subject to the same reasons given in claims 15 and 18.

9.   Claim 21:

The claim 21 encompasses the same scope of invention as that of claims 1, 5, 7-8, 11, 13

and 15. The claim 21 is subject to the same reasons given in claims 1, 5, 7-8, 11, 13 and

15.

Claim 22:

The claim 22 encompasses the same scope of invention as that of claim 21 except additional claimed limitation of laying out graphs. However, the Chilimbin reference further discloses the claimed limitation of laying out graphs (figures 2, 3, 5 and 7; column 9-10).

10.   Claim 23:

The claim 23 encompasses the same scope of invention as that of claim 21 except additional claimed limitation of populating a list of related items. However, the Chilimbin reference further discloses the claimed limitation of populating a list of related items (populating a list of related items in the memory block or the affinity graph; figures 2, 3, 5 and 7; column 9-10).

11.   Claim 26:

The claim 26 encompasses the same scope of invention as that of claim 15 except additional claimed limitation of a computer readable medium. However, the Chilimbin reference further discloses the claimed limitation of a computer readable medium (figure 1; column 5-6). Other limitations are subject to the same reasons as given in claim 15.

12.   Claim 27:

The claim 27 encompasses the same scope of invention as that of claim 15 except additional claimed limitation of a system. However, the Chilimbin reference further discloses the claimed limitation of a system (figure 1; column 5-6). Other limitations are subject to the same reasons as given in claim 15.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jin-Cheng Wang whose telephone number is (703) 605-1213.

The examiner can normally be reached on 8:00 - 6:30 (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Mike Razavi can be reached on (703) 305-4713. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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